

KAL  
03-07-01

1635

## RAW SEQUENCE LISTING

DATE: 03/07/2001

PATENT APPLICATION: US/09/199,129A

TIME: 13:40:57

Input Set : N:\COPIES\EBONY\ES.txt

Output Set: N:\CRF3\03072001\I199129A.raw

ENTERED

See p.5

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1 <110> APPLICANT: Byrum, Joseph R.
2   La Rosa, Thomas J.
4 <120> TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
5   Plants
7 <130> FILE REFERENCE: 38-21(15075)B
9 <140> CURRENT APPLICATION NUMBER: US 09/199,129A
10 <141> CURRENT FILING DATE: 1998-11-24
12 <160> NUMBER OF SEQ ID NOS: 5521
14 <210> SEQ ID NO: 1
15 <211> LENGTH: 254
16 <212> TYPE: DNA
17 <213> ORGANISM: Glycine max
19 <220> FEATURE:
20 <221> NAME/KEY: unsure
21 <222> LOCATION: (1)..(254)
22 <223> OTHER INFORMATION: unsure at all n locations
23 <223> OTHER INFORMATION: Clone ID: 700547901H1
25 <400> SEQUENCE: 1
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W--> 29 ttcaagctac ttgncctttc cttcnaactc tgcactcttc attcgctgag atttttcttcg 120
W--> 31 aagagagatt cgaagatgga tggaagagcc gntgggtgct anccgattgg aaaaggagtg 180
W--> 33 aaggaaaagc gggtagcttc aagcacacag caggaaaatg gtctggggat ccngatgacn 240
35 aaggtcttca gaca 254
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 285
40 <212> TYPE: DNA
41 <213> ORGANISM: Glycine max
43 <220> FEATURE:
44 <221> NAME/KEY: unsure
45 <222> LOCATION: (1)..(285)
46 <223> OTHER INFORMATION: unsure at all n locations
47 <223> OTHER INFORMATION: Clone ID: 700547902H1
49 <400> SEQUENCE: 2
W--> 51 gggcgcttct ggngccgcca cngctgttcc ttcgacgcgc ggcgngnecg gnggcgctgc 60
W--> 53 gccaacccgg gactgcggcg ggtncctgt tctgcaacgc catcgngnga agcccaccgn 120
W--> 55 ctagnctggc ggagttcacc ctgggcaacg ancatgantt ctacgaagtg agcctggtgg 180
W--> 57 acgggtacnn cctaccatc tccatnancn ccttcaaagg attccggaaa atgcactacn 240
W--> 59 ccgggttgcg tgaacgangt caacnccatg tgcccgttg ggctt 285
62 <210> SEQ ID NO: 3
63 <211> LENGTH: 277
64 <212> TYPE: DNA
65 <213> ORGANISM: Glycine max
67 <220> FEATURE:
68 <221> NAME/KEY: unsure
69 <222> LOCATION: (1)..(277)
70 <223> OTHER INFORMATION: unsure at all n locations
71 <223> OTHER INFORMATION: Clone ID: 700547903H1
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73 <400> SEQUENCE: 3
75 cggtagccca ttcatggaa gcctggaaac cccagttaca tccagccctt tgatcgcatg    60
77 gtacttgctc aacctgccc caccagaaac cgcagtgcgc ccactactaa gagggatoga    120
79 ggtgggcctg gcccacggat accttctggt gggeccattc gtgaaggccg ggcctcttag    180
81 gaacaccgag atcgccgggc aagcgggctc tctggccgcc ggtgggcttg tggatgcct    240
W--> 83 cagcctttgc ctcaaatct ntgggatttc atccttc    277
86 <210> SEQ ID NO: 4
87 <211> LENGTH: 219
88 <212> TYPE: DNA
89 <213> ORGANISM: Glycine max
91 <220> FEATURE:
92 <221> NAME/KEY: unsure
93 <222> LOCATION: (1)..(219) /
94 <223> OTHER INFORMATION: unsure at all n locations
95 <223> OTHER INFORMATION: Clone ID: 700547904H1
97 <400> SEQUENCE: 4
99 agccatcatc atgggagcag tgattctccc agatctcggc accgagattt tgattccggt    60
101 ctgcgccatc attggaatag ggttcgccct cttccagtgg gtctctgtct ccaagggttaa    120
103 gctctccgct gccagagacg cttcccctaa cgccgccggc aaaaatggct acaacgatta    180
W--> 105 cctcatcgna gaagaggaag gcctcaacga tcacnacgt    219
108 <210> SEQ ID NO: 5
109 <211> LENGTH: 271
110 <212> TYPE: DNA
111 <213> ORGANISM: Glycine max
113 <220> FEATURE:
114 <221> NAME/KEY: unsure
115 <222> LOCATION: (1)..(271) /
116 <223> OTHER INFORMATION: unsure at all n locations
117 <223> OTHER INFORMATION: Clone ID: 700547905H1
119 <400> SEQUENCE: 5
W--> 121 ctgcgcacc cttatcctcg ttgctttctc tttgcacntc attcttggtt ttttcgacga    60
123 ctccaccact gcttcaaaa atgctacaaa ccggaagaag cactagtgtc atagttatca    120
125 ttcttccagg ggataaaaata ttaggtctgg caaaaatttc ttgggtattg gaatccagg    180
127 agatgccaa gactttctca atcaagtcga gtcatagggt ttctagagag caataggaaa    240
129 gtgcttacta aaaacaatct tatttaaattg c    271
132 <210> SEQ ID NO: 6
133 <211> LENGTH: 245
134 <212> TYPE: DNA
135 <213> ORGANISM: Glycine max
137 <220> FEATURE:
138 <221> NAME/KEY: unsure
139 <222> LOCATION: (1)..(245) /
140 <223> OTHER INFORMATION: unsure at all n locations
141 <223> OTHER INFORMATION: Clone ID: 700547906H1
143 <400> SEQUENCE: 6
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W--> 147 cttctctacc ttccacgcga accttctctc gaaaccgaag cctcattgtc aaagccnctt    120
W--> 149 tcttcttggt ctgacgactt ctccaaaagn aggcgncgnt tcagcgcngn aancgccgna    180
W--> 151 ctctcggnct cgctcccnca gttannngng cgtgncgaag ancgcttnc ggagttggan    240

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W--> 153 anagt                                     245
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      157 <211> LENGTH: 275
      158 <212> TYPE: DNA
      159 <213> ORGANISM: Glycine max
      161 <220> FEATURE:
      162 <221> NAME/KEY: unsure
      163 <222> LOCATION: (1)..(275) ✓
      164 <223> OTHER INFORMATION: unsure at all n locations
      165 <223> OTHER INFORMATION: Clone ID: 700547907H1
      167 <400> SEQUENCE: 7
      169 tcacaaaaca acttttcaaac tctgagaaag aatggctgcc aacacattga tgagtactgc   60
W--> 171 tatctcagcc ttcccatctc tcttttcttc ctcaaaatcc agatttgcca ncgcagttcc   120
W--> 173 tctttctagc tttgggtgtca ccaatgcctc ttcttcnccg ttttctatga gtgctgactg   180
W--> 175 gatgccaggc naggctagac ctcttanct tgatgggttca gcacctgggtg actttggatt   240
W--> 177 cgancctctt ngctttgggtg aagtaccaga gaate                                     275
      180 <210> SEQ ID NO: 8
      181 <211> LENGTH: 273
      182 <212> TYPE: DNA
      183 <213> ORGANISM: Glycine max
      185 <220> FEATURE:
      186 <221> NAME/KEY: unsure
      187 <222> LOCATION: (1)..(273) ✓
      188 <223> OTHER INFORMATION: unsure at all n locations
      189 <223> OTHER INFORMATION: Clone ID: 700547909H1
      191 <400> SEQUENCE: 8
W--> 193 anagcctagg gttctttttc tcttctgtct tcaactccttg caaatctcgc gtaacgcgatg   60
      195 cgttttcttca ctcaatcgga gccagcact gatctatttg gaactcttcg aggtctgtgg   120
W--> 197 ttttactgta ctcaatttga taaattaagg cannnnnnnnn nnnnnnnnnn nnnntcccc   180
      199 tgggtgtttat ggatgtgtcc atcgatgggg atcctgttga aaggatgggtt tttgagcttt   240
W--> 201 ctatgatgtt gctcccaaga ctgnagaaaa ctt                                     273
      204 <210> SEQ ID NO: 9
      205 <211> LENGTH: 235
      206 <212> TYPE: DNA
      207 <213> ORGANISM: Glycine max
      209 <220> FEATURE:
      210 <221> NAME/KEY: unsure
      211 <222> LOCATION: (1)..(235) ✓
      212 <223> OTHER INFORMATION: unsure at all n locations
      213 <223> OTHER INFORMATION: Clone ID: 700547910H1
      215 <400> SEQUENCE: 9
      217 agccatttca aggataacga atttatgggt ggatcaattt caaaacggag gcgttctagg   60
      219 caacgttcgg cctcaaatct tcttcctcgg tatcaacaac ctcatctccc acaaagccaa   120
      221 gataatgggt ctgtggggca ttatgggtat tcatctcaga gctatagtgg tggctgtgct   180
W--> 223 ccagaacaag taaagagctn ggataggaag tatttaaggn taggtgatga ttata       235
      226 <210> SEQ ID NO: 10
      227 <211> LENGTH: 265
      228 <212> TYPE: DNA
      229 <213> ORGANISM: Glycine max
  
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231 <220> FEATURE:
232 <221> NAME/KEY: unsure
233 <222> LOCATION: (1)..(265) ✓
234 <223> OTHER INFORMATION: unsure at all n locations
235 <223> OTHER INFORMATION: Clone ID: 700547911H1
237 <400> SEQUENCE: 10
W--> 239 caaaaaaccc aaatgcaggt ttctccacta aaacttgggc gattttcana tttngtactt 60
241 tggcaccctt cacatagtag ttctcaccat gtccgatact aaaagaagtg ccaacaacag 120
243 cggttccaag cggagcctgc catcgtggac gaattcaagg gaaaatgaga gcgataacag 180
245 tgcaaagaaa ccaactttgg atggccaagg tgagaaatcc agtgacgctg agacacccca 240
247 caagagcaaa gtccaaaatg aaaat 265
250 <210> SEQ ID NO: 11
251 <211> LENGTH: 273
252 <212> TYPE: DNA
253 <213> ORGANISM: Glycine max
255 <223> OTHER INFORMATION: Clone ID: 700547913H1
257 <400> SEQUENCE: 11
259 gtcacaaccc aagcctccgc cgcgattttc cggccatgtg cctcgaaatc gaggtttctg 60
261 accggctctt cgggtaaact caaccgggaa gtgactatga ggccaatggg gtgccctcct 120
263 tctgcctctt tcaaggttga agccaagaag ggagagtggg tacctggctt ggcctcccca 180
265 acttacctca atggcactct tcttggtgac aatggatttg accctctggg actagctgag 240
267 gacccagaga acttgaggtg gtacgttcaa gcc 273
270 <210> SEQ ID NO: 12
271 <211> LENGTH: 273
272 <212> TYPE: DNA
273 <213> ORGANISM: Glycine max
275 <220> FEATURE:
276 <221> NAME/KEY: unsure
277 <222> LOCATION: (1)..(273) ✓
278 <223> OTHER INFORMATION: unsure at all n locations
279 <223> OTHER INFORMATION: Clone ID: 700547914H1
281 <400> SEQUENCE: 12
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285 cctctctctc atcggaatct ccaaaaagaa tggacaacaa aacgcagcag tccgagagta 120
287 agcaaaaacga caacgacgag gaagttgcgc caaaacgaca agaccctaac ccgtcgtctg 180
289 gcggttgagg cttttcaccc ctctcgtttc tctccgatct tcagaaggcc gccgctgttg 240
291 cagccgaaga gatctctcgc aatgctgctg tag 273
294 <210> SEQ ID NO: 13
295 <211> LENGTH: 277
296 <212> TYPE: DNA
297 <213> ORGANISM: Glycine max
299 <220> FEATURE:
300 <221> NAME/KEY: unsure
301 <222> LOCATION: (1)..(277) ✓
302 <223> OTHER INFORMATION: unsure at all n locations
303 <223> OTHER INFORMATION: Clone ID: 700547916H1
305 <400> SEQUENCE: 13
307 agaacaagta gttgagaact aagaaggaga agcaaatggc ttctcaatg atctcttccc 60
309 cagctgttac cactgtcaac cgtgccggtg ccgcatggtg tgctccattc actggcctca 120

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W--> 311 agtccatggc tggcttcccc accagaaaga ccaacaatga cattanctcc attgctagca 180
W--> 313 acggtggaag agtgcnatgc atgcaggtgt gggccaccag ttggcaagaa gaagtttgag 240
W--> 315 actcnttcct acctgccaga ccttgatgat gcacatt 277
      318 <210> SEQ ID NO: 14
      319 <211> LENGTH: 275
      320 <212> TYPE: DNA
      321 <213> ORGANISM: Glycine max
      323 <220> FEATURE:
      324 <221> NAME/KEY: unsure
      325 <222> LOCATION: (1)..(275) /
      326 <223> OTHER INFORMATION: unsure at all n locations
      327 <223> OTHER INFORMATION: Clone ID: 700547917H1
      329 <400> SEQUENCE: 14

W--> 331 gagcatttcn aatggagcaa gaaattggtg attcattttc tttcgttggg nattgcattn 60
W--> 333 gcaatgatct ggattcattg attggettgc nacgggnnct tgggttctac tctgaacacn 120
W--> 335 aattttcaag atagctatgg gtgttgnata tttttntgtg aagaattaat gagcataatg 180
W--> 337 ttttctggaa agantggggg cagacgaatc tcattgtcaa ganttacaga gtttgagtgt 240
W--> 339 gtcaaagcga cttgtganga gtgttagcca gaagt 275
      342 <210> SEQ ID NO: 15
      343 <211> LENGTH: 273
      344 <212> TYPE: DNA
      345 <213> ORGANISM: Glycine max
      347 <220> FEATURE:
      348 <221> NAME/KEY: unsure
      349 <222> LOCATION: (1)..(273) /
      350 <223> OTHER INFORMATION: unsure at all n locations
      351 <223> OTHER INFORMATION: Clone ID: 700547920H1
      353 <400> SEQUENCE: 15

      355 attctctcca tatattatct caaaccctc tcacagaatg ggaagtgtcg gaggaactga 60
      357 ctatgggtgca tacacttatg agaattctga gagagagcct tactggccat cagagaagct 120
W--> 359 taagatttcc atcactggng ctgggggttt tatcgctca cacatagctc ggcgcctcaa 180
      361 gacagagggg cattacatta ttgcttctga ttggaagaaa aatgagcaca tgactgagga 240
      363 catgttctgt gatgaattcc atcttgttga tct 273
      366 <210> SEQ ID NO: 16
      367 <211> LENGTH: 273
      368 <212> TYPE: DNA
      369 <213> ORGANISM: Glycine max
      371 <220> FEATURE:
      372 <221> NAME/KEY: unsure
      373 <222> LOCATION: (1)..(273) /
      374 <223> OTHER INFORMATION: unsure at all n locations
      375 <223> OTHER INFORMATION: Clone ID: 700547921H1
      377 <400> SEQUENCE: 16

      379 atcacaccat gccaccgcta gtgacaaatca agagaactcc ttcaagaagg gttctgtctg 60
      381 ctctgccagt aaaagtcagg agaacaagtc atctggatta tcaaagtcac cgactaatgc 120
W--> 383 aaataattat ggttcagttt cttctcaaag ntcaagtgtc cctgcaaaca gtactgagga 180
      385 tgacatggat gattttgatc caagaggaac ttctacaaa acttcagctg gaaactctaa 240
      387 cccaggttga tctcttttga caagattaat cgg 273
      390 <210> SEQ ID NO: 17

```

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

DATE: 03/07/2001

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TIME: 13:40:58

Input Set : N:\COPIES\EBONY\ES.txt

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L:27 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:29 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:31 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:51 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:53 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:55 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:83 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:153 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:171 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:177 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:223 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:283 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:333 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:491 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:519 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:539 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:589 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:591 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27

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L:639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28